

ABSTRACT

Once a binding assay design and sample is received from a scientist, an experiment design is automatically prepared for generating a binding-ready biological sample to be used by the binding assay. Materials usage and plate layout is then automatically optimized for generating the binding-ready biological sample. A robot method is chosen for generating the binding-ready biological sample and work instructions generated for preparing the binding-ready biological sample. The work instructions are based on the experiment design and the robot method. The work instructions are then transmitted towards a controller for execution by robot stations. From the robot method it is then determined whether pooling and/or splitting needs to occur. If pooling and/or splitting needs to occur, a worklist containing a set of instructions for pooling and splitting is generated and transmitted towards the controller for execution by the robot stations.